

What is claimed is:

1. A process system comprising:
a chamber;
5 a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes;
a first diffusion portion which diffuses said gas in a direction approximately horizontal to a major surface of said supply plate; and
a second diffusion portion which leads said gas diffused by said first diffusion
10 portion to said gas holes.
2. The process system according to claim 1, wherein said first diffusion portion is comprised of a disk-like member having a plurality of grooves formed in one side thereof and communicating with one another and through holes formed in said plurality of grooves and led to the other side.
- 15 3. The process system according to claim 2, wherein at least one of said grooves are provided at positions to which said gas is supplied, and said gas supplied to said at least one groove is dispersed to the other grooves and flows out to the other side through said through holes respectively provided in said other grooves.
4. The process system according to claim 1, wherein said second diffusion portion
20 is comprised of a disk-like member having a groove formed in one side thereof and placed over said supply plate to form a hollow portion between itself and said one side and through ~~holes~~ holes formed in said groove and led to the other side, and said gas from said first diffusion portion is supplied to said hollow portion via said through holes.
5. The process system according to claim 4, wherein said disk-like member
25 constituting said second diffusion portion is made of a same member as said disk-like member constituting said first diffusion portion, and said groove constituting said second diffusion portion and said grooves constituting said first diffusion portion are formed in

opposite sides of said member.

6. The process system according to claim 4, further comprising a partition member which is provided in said groove constituting said second diffusion portion and separates said hollow portion into a plurality of areas, and wherein said first diffusion portion supplies
5 said gas, dispersed, to said plurality of areas.

7. The process system according to claim 1, wherein said first diffusion portion is comprised of a cylindrical member having a plurality of linear holes communicating with one another, formed by boring and sealing end portions of bored portions, at least one of said holes is supplied with said gas and said gas supplied to said at least one hole is
10 dispersed to the other holes.

8. The process system according to claim 7, wherein said cylindrical member has connection holes provided in such a way as to be led to said other holes from its one side, and said gas supplied to said other holes is supplied to said second diffusion portion from said connection holes.

15 9. A process method which uses a process system comprising a chamber and a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes, comprising:

a first diffusion step which linearly diffuses said gas in a direction approximately horizontal to a major surface of said supply plate; and

20 a second diffusion step which leads said gas diffused in said first diffusion step to said gas holes.

10. The process system according to claim 1, wherein a linear gas flow passage approximately horizontal to a major surface of said supply plate is formed in said first diffusion portion, and said gas is diffused in a direction approximately horizontal to the
25 major surface of said supply plate linearly.

11. The process system according to claim 7, wherein said cylindrical member comprises said plurality of liner holes which are provided at different positions in a

direction of thickness of said cylindrical member.

12. The process system according to claim 11, wherein said plurality of linear holes respectively constitute gas flow passages independent from each other.

13. A process system comprising:

5 a chamber;

a support which is provided inside said chamber for placing a process target thereon;

a first gas supply passage which has gas holes, and supplies a gas through said gas holes to a position corresponding to a center area of said process target in said chamber;

10 a second gas supply passage which has gas holes, and supplies a gas through said gas holes to a position corresponding to an end area of said process target in said chamber; and

a controller which controls a ratio of amounts of gases flowing through said first gas supply passage and said second gas supply passage.

15 14. The process system according to claim 13, wherein said first and second gas supply passages supply a same gas to said chamber.

15 15. The process system according to claim 13, wherein said controller includes a first mass flow controller provided to said first gas supply passage, a second mass flow controller provided to said second gas supply passage, and a control unit which controls
20 said first and second mass flow controllers.

16. The process system according to claim 13, wherein said controller controls amounts of gases output from said first and second gas supply passages in such a way as to make a thickness of a film formed on said process target uniform.

25 17. The process system according to claim 13, wherein said controller controls kinds and amounts of gases output from said first and second gas supply passages in such a way as to make thicknesses of a plurality of films formed on said process target uniform respectively.

18. The process system according to claim 13, wherein

said first and second gas supply passages have, in common, a supply plate which has a plurality of gas holes for supplying a process gas into said chamber through said gas holes; and

5 said first and second gas supply passages respectively have a first diffusion portion which diffuses said gas in a direction approximately horizontal to a major surface of said supply plate, and a second diffusion portion which leads said gas diffused by said first diffusion portion to said gas holes.

19. A process method comprising:

10 setting a process target inside a chamber; and

performing a film forming process by supplying process gases with different rates to a position corresponding to a center area of said process target in said chamber and to a position corresponding to an end area of said process target.
